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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,367	03/05/2002	Robert B. Beelman	61751-10201	7301

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EXAMINER	
BHAT, NINA NMN	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/091,367	BEELMAN ET AL.	
	Examiner	Art Unit	
	N. Bhat	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-10,12-23,25-29 and 34-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-10,12-23,25-29 and 34-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments and amendments have been fully and carefully considered and are found persuasive over the rejections made in the previous office action under 35 U.S.C. § 103(a) over Lehmann et al. in combination with Leblond.

As applicant has correctly argued, Lehmann et al. is directed to cleaning concentrate for washing foodstuffs, nowhere in Lehmann et al. is it taught to use an ant microbial solution comprising electrolyzed basic water having a pH of at least 9.0, electrolyzed basic water has been given weight in determining the patentability of the mushroom washing process because as described in the definition electrolyzed water generated wherein a dilute salt water solution is passed through a cell containing inert positively-charged and negatively-charged electrodes separated by a membrane, the generator can provide electrolyzed basic water which has an pH of about 11.4 and a low oxidation reduction potential lower than -700mV and electrolyzed acid water which has a pH of about 2.2 to 3.0 having a high oxidation-reduction potential typically greater than +1100mV. The electrolyzed water as claimed would not read on tap water or a solution, which contains electrolytes or includes ions. Leblond is deficient in teaching the invention for reasons argued by applicant and the following. Leblond teaches a device for washing foods stuffs with electrolyzed water, the electrolyzed water is not basic nor the method of contacting fresh or processed mushrooms with a first antimicrobial solution comprising electrolyzed basic water having a pH of at least 9.0 followed by rinsing the mushrooms after the first contacting step with a pH neutralizing solution having a pH sufficient to return the mushrooms to the mushroom physiological pH of about 6.5 has not been taught.

2. A new ground of rejection follows:

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 2-10,12-23,25-29 and 34-50 are rejected under 35 U.S.C. 103(a) as being obvious over Beelman et al. USP 5,919,507 in combination with Koseki et al. "Decontamination of Lettuce using Acidic Electrolyzed Water".

Beelman et al. '507 qualifies as a reference under 102(b) as the filing date of the instant application is March 5, 2002 and the issue date of the Beelman patent is July 6, 1999, there is no continuity between the instant application and that of the patent and as such, the Beelman et al. '507 a qualifying reference against the instant claims.

Beelman et al. teaches a method of preserving mushrooms which include the steps of contacting the mushrooms with a first antimicrobial solution having a pH of from about 9.5 to about 11.0 and rinsing the mushrooms one or more times immediately after the contacting step with a pH neutralizing solution of erythorbic acid and sodium erythorbate in a ratio of about 1:4 having a sufficient pH to return the mushrooms to the mushroom physiological pH of about 6.5.

However, Beelman et al. does not teach that the antimicrobial solution comprises electrolyzed water.

Koseki et al. teach decontamination of lettuce using acidic electrolyzed water. In particular, Koseki et al. teaches the disinfectant effect of acidic electrolyzed water, ozonated water, and sodium hypochlorite solution on lettuce. Koseki et al. teach that the use of acidic electrolyzed water for decontamination of fresh lettuce is suggested to be an effective means of controlling microorganisms.[Note the abstract] Koseki et al. teach that using acidic electrolyzed water is effective in agriculture, water treatment and food sanitation and is used can be used as

a disinfectant for fruits and vegetables and not only limited to lettuce. Koseki et al. teach that when electrolyzed basic water (pH of more than 11) was used to wash lettuce [Page 657, left column], for one minute, the disinfectant effect on aerobic bacteria, molds and yeast was larger than that for the treatment by soaking in acidic electrolyzed water or ozonated water for 10 min. Koseki et al. teach that is considered to act like a dilute sodium hydroxide aqueous solution. Thus it would act like a surface active agent against the surface of lettuce so the microorganisms on the surface would disinfected easily, because acidic electrolyzed water has a strong disinfectant effect, the small number of microorganisms would be disinfected even without pretreatment of basic electrolyzed water, admittedly, Koseki et al. prefers to use acidic suggestion to use basic electrolyzed water as an antimicrobial or disinfectant for fruits and vegetables such as lettuce.

It would have been obvious to one having ordinary skill in the art to provide a process for preserving fresh and processed mushrooms comprising the steps of contacting the mushrooms with a first antimicrobial solution having a pH of at least about 9.0 followed by rinsing the mushroom after the antimicrobial contacting step with a pH-neutralizing solution having a pH sufficient to return the mushrooms to the mushroom physiological pH of about 6.5 wherein the neutralizing solution comprises and acidulant selected from the group consisting of ascorbic acid, erythorbic acid, citric acid, fumaric acid and combinations thereof because Beelman et al.'507 teaches using and antimicrobial solution having a pH of greater than 9 followed rinsing with a 1:4 solution of erythorbic acid and sodium erythorborate to return the mushroom to physiological pH of about 6.5 of a mushroom. Koseki et al. teaches using electrolyzed acidic, electrolyzed basic water, ozonated water and NaOCl solution and does a comparison, gets good results using a basic electrolyzed water on washing lettuce and cut vegetables. Koseki et al. further teach a method of washing lettuce, which comprises washing with electrolyzed basic

water, followed by washing with electrolyzed water or can use only electrolyzed acid water. One of ordinary skill in the art would be motivated to use antimicrobial solution comprising electrolyzed basic water because Beelman et al. '507 teach that any antimicrobial solution having a pH of 9 can be used for washing mushrooms. Koseki et al. teaches using a basic electrolyzed water solution having a pH of 11.4 is found to be effective in reducing the pathogens on lettuce and can be used on other vegetables, to select a known basic antimicrobial solution for its intended use of reducing pathogens in the process of Beelman would have been obvious to one of ordinary skill in the art. With respect applicant's dependent claims limits the neutralizing solution acidulant, pH, including a browning inhibitor comprising ascorbate, erythorbate, EDTA and calcium chloride, fumaric acid and sodium benzoate has been taught in the Beelman et al. process. It is maintained that applicant's invention is rendered obvious as a whole by the combined teachings of Beelman et al. '507 in combination with Koseki et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

N. Bhat
Primary Examiner
Art Unit 1764